


The
ABATEMENT
of

**ROCHESTER
MADE**



**MEANS
QUALITY**

SMOKE



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Abatement of Smoke

Rochester (N.Y.) Chamber of Commerce

ECONOMY, civic pride and common sense all call for the abatement of the smoke nuisance that is destroying over a million dollars worth of merchandise and property in Rochester every year. The health of our citizens is impaired and many beautiful buildings rendered unsightly by this nuisance. Some years ago it was the custom to point with pride to the "smoking chimneys of prosperity," when, as a matter of fact, the chimneys were smoking, not with prosperity, but because they were wasting so much burnable fuel.

¶ The power plant of the factory which makes the least smoke is operated most economically. This fact is being acknowledged by a larger number of people each year. When it is universally known, the smoke nuisance will be eliminated.

¶ A smoking kerosene lamp would not be tolerated by anyone, because the individual using the lamp would be the one directly affected by it. The condition is reversed with the smoking chimney; the individual causing the smoke is the only one not directly affected. The smoke goes over his head and is deposited on the property of his neighbor.

¶ It is desirable to show some of the common causes of black smoke production, and the kerosene lamp will make a good example. Kerosene oil burning in a saucer, smokes badly, but when placed in the reservoir of a properly constructed lamp, under perfect conditions, there is no smoke—on the contrary, there is gained the maximum amount of light and heat.

Causes

¶ When the wick of the lamp is turned too high, more fuel is supplied than the combustion chamber of the lamp can accommodate, with the result that the unburned fuel passes off in the form of smoke. This is equally true of the factory boiler which is continuously crowded with fuel in the hope of maintaining a greater head of steam than the capacity of the installation allows. This condition is very common in small plants. It cannot be overcome or cured until the basic cause is removed.

**Over
Crowding**

¶ The same condition may arise through stopping up half of the holes in the burner of the kerosene lamp. In this case you have reduced the air supply instead of increasing the fuel supply. The result is the same—the unburned fuel becomes smoke. Many boiler installations have inadequate grate capacities, and even under a normal firing will smoke because the grate does not admit sufficient air. The only remedy is a new grate.

**Small
Grates**

¶ There are two other items of faulty construction in boiler plants; first, too small a combustion chamber, which is analogous to too small a lamp chimney and a smoke stack of insufficient size to conduct the gases away from the fire. This latter condition might be compared to placing a piece of cardboard over the top of the lamp chimney.

Abatement of Smoke

Kinds of Prevention

¶ It is evident that there are two basic causes of smoke production—first—improper firing, and second—faulty construction. When these conditions are remedied, black smoke disappears. The large plant that is of faulty construction should be rebuilt to meet the requirements. It would be a paying investment in the point of economy. Many small plants, especially heating installations, in congested sections, cannot be rebuilt owing to the surrounding conditions, and to meet the requirements of the public demand they should burn semi-anthracite or anthracite coal, and should have a special care in the firing. In the use of soft coal, proper equipment and intelligent operation are absolutely essential if smoke is to be prevented.

¶ Civic pride and consideration of others should urge the elimination of the smoke nuisance. Considerations of economy added to the foregoing make such action more urgent. In view of the fact that each year sees a more solid public opinion opposed to the production of black smoke because of waste, of injury to one's neighbors, buildings and merchandise, of injury to the health and cleanliness of the City, is it not wise, as well as public-spirited, to again seriously consider whether a greater effort should not now be made to abate the smoke nuisance in your plant?

A Referen- dum

The Letter We Sent Out

1. Black smoke production is undesirable—no one likes it, not even the people who make it. The smoke destroys a million dollars of merchandise a year in Rochester. It pollutes the air and the soot gets into houses, offices and stores, making a big cleaning expense. That's the case against black smoke.
2. Preventing black smoke isn't always easy—there are conditions which must be taken into consideration. Smoke consuming devices do not always work out. Everyone can't use hard coal or semi-bituminous because of the expense involved. That's the case for the man who is producing black smoke in more than legal amounts.

¶ Between these two propositions there must be some compromise. We take it for granted that you desire to eliminate the smoke nuisance as much as possible. Will you write us your views of the situation, your experience both in your own case and with others?

¶ The Committee has gone into the work with a determination to help, not to hinder business. We believe much can be done with your help if the good will of all can be focused and used to good advantage. Won't you give it—at least by writing us your experience with the problem?

A Wide Experience

YAWMAN & ERBE MFG. COMPANY

¶ We believe this subject is one of great importance to manufacturers, as well as the public at large, and one, the conditions of which, cannot be met with very easily.

¶ We have had considerable experience at our different plants in trying to overcome this smoke nuisance, and getting all possible benefit out of the unburned carbon which floats away in the air, but the proposition has been a hard one. There is no stoker nor method in use today which is absolutely "fool-proof" or automatic so that conditions could be governed without the aid of an experienced fireman.

¶ We have found that stokers or Dutch Ovens work out fairly well if they are properly operated, but it all depends on the man in front of the boilers. You can make a stoker smoke as badly as a common setting if you do not handle the stoker right. This has been proven at our St. Paul Street Plant. Before we built our Gates Plant all the woodwork was cut and sawed at the St. Paul Street Plant; therefore, we burned all our shavings.

¶ Shavings and wood are supposed to give a clear fire, with a yellowish or light brownish smoke of very thin character. We burned both shavings and coal in the same furnace, and even with the use of stokers there were several occasions where the smoke inspector made complaint against us on account of the smoke.

¶ We cautioned our people, and even went as far as to discharge various firemen. The best results we obtained under such conditions were with men who understand the combustion of coal, and keep their furnaces in good working order.

¶ After the Gates Plant was installed the Wood-working Departments were moved there, with the result that the burning of shavings was practically eliminated from the St. Paul Street Plant, the result being that we produced more smoke, and had to be more careful with our firemen to avoid this nuisance.

¶ At the Gates Plant our Dutch Oven works out equally as well as the stokers, and even better when we are burning mostly shavings. We have very little smoke, and such as we get is of a very light brownish color, so that it is not objectionable; having also a good fireman who understands combustion very thoroughly, we are able to cut the smoke down to a minimum.

¶ Considering all the various ways of combusting fuel, our experience has demonstrated to us that it is absolutely up to the fireman—he can control the smoke without trouble, and our belief is that the only way to overcome this nuisance is, not to attack the manufacturers, but get after the men who are causing this nuisance. We cannot run our factories with-

Nothing
"Foolproof"

Dutch
Ovens

Shavings

The
Fireman

Something About "Consumers"

out fuel; neither can we stand over our firemen all day long to see that they are not making any smoke, and we do not cherish the idea of being summoned before Court because our fireman has been careless and allowed his furnace to smoke when we may have been out of town and could not control the situation.

¶ We believe that a strict law governing firemen would have better results in eliminating the smoke nuisance than all the smoke consumers, stokers and new fangled ideas put before the public today.

MORITZ WIESNER,

General Superintendent.

BLAIR CAMERA DIVISION

EASTMAN KODAK COMPANY

¶ Replying to Bulletin 4-11 relative to the prevention of smoke in Rochester, would state that at this factory, which is located at 1447 St. Paul Street, we have used for the past six years a so-called "smoke consumer" which is nothing more nor less than forced draft operated by steam jet over the fire for five minutes after firing the boilers. By use of this steam jet over fire we eliminate about 85% of the black smoke; in other words, when the boilers are first fired, for a period of perhaps 1 to 1½ minutes, there is some black smoke that comes from the chimney, but after that time there is practically none, and this helps to a great degree to do away with the smoke nuisance. While it is not perfection, yet it is a good step toward cleanliness of the air.

¶ There are many Companies that advertise smoke consumers, increased efficiency, etc., but all of them fall short of being perfect. Another way of eliminating smoke is by careful firing. Boilers that are fired properly will not throw off within 50% as much black smoke as boilers that are fired carelessly. The writer is heartily in favor of doing away with the smoke nuisance as far as it can be done, without handicapping the manufacturing interests of the city, for without these manufacturing interests the city would not be what it is today.

F. W. BARNES, Manager.

THE PFAUDLER COMPANY

¶ In reply to your Bulletin No. 4-11, it is my experience, as manager of a manufacturing plant containing three 350 horse power boilers all operated to their maximum capacity, that it is possible to use bituminous slack coal and entirely eliminate smoke.

¶ It does not follow that our method could be applied to every boiler but it is a fact that smoke can be prevented by the use of mechanical appliances and proper fire box arrangements.

¶ Each situation demands special treatment, but it is possible to eliminate the smoke nuisance in every case, and at the same time keep the expense within reason.

Steam
Jets

Slack
Coal

Correct Installations

¶ Ignorance in installations and ignorance in firing, both of which are entirely preventable,—are responsible for 90% of the cases which today are a nuisance.

¶ A man should no more be permitted to discharge black smoke into the air to the detriment of his neighbors' health or property, than he should to permit noxious fumes from chemicals to go abroad.

¶ The State stops the latter immediately, although there is no question but that more damage today to health and property results from the smoke nuisance than from the fumes of chemicals. The main reason for the smoke nuisance today is ignorance all along the line. Just as soon as that is cured, the nuisance can be removed.

E. G. MINER,

Vice-President.

MECHANICS INSTITUTE

¶ At the request of our President, Mr. Gibson, I am answering your Bulletin No. 4-11 in regard to prevention of smoke in Rochester. I believe that in all new power plants above 100 H. P., proper stokers, properly installed, with proper sized chimneys, will practically eliminate smoke if the boilers are not being forced far beyond their rating or are not called on suddenly to respond to a peak load. Plants under this size can be taken care of with shaking grates, good draft conditions and good chimneys fairly satisfactorily, good draft conditions being a very important item. It is possible in many of these plants to burn bituminous coal and in many the use of steam jet devices is an aid. Many of these plants can be helped out materially also by mixing a certain amount of anthracite or semi-anthracite screenings. Many small plants can afford to use semi-bituminous coal, which, with proper care can be burned fairly smokeless. I would like to say that steam jets are a help in many cases but not always.

¶ The hardest condition to meet is to adapt old plants to smokeless conditions without excessive expense in resetting boilers, enlarging stacks and breeching connections. Intelligent firing means a great deal, but the principal trouble is that when you get an intelligent fireman he soon becomes an engineer, and you lose him as a fireman.

ALLEN S. CROCKER,

Supt. Department Industrial Arts.

AMERICAN EXPRESS COMPANY

¶ Referring to your bulletin under heading "Prevention of Smoke in Rochester," I beg to advise that I am unable to give you any information of value from personal experience. I only recently became a resident of Rochester after a residence of twenty odd years in New York City where the smoke nuisance has been abated by the use of hard coal. I understand the

From
An
Expert

An
Observer

Testimony on "Stokers"

same regulation cannot be exacted in this city on account of the cost involved.

¶ The only means I can see is to enlist the co-operation and stimulate enthusiasm of the consumers toward elimination of the nuisance as far as practicable under the present regulations, commencing with the Chamber of Commerce Building.

¶ The first impression I got of Rochester, and it was more pronounced than since I became accustomed by environment, was the pall of black smoke all over the city and its resultant effect upon buildings and trees.

W. H. DODD,
General Agent.

THE HAYDEN COMPANY

¶ In answer to your request for the experience of the members in connection with the Smoke Nuisance and the prevention of same, I take pleasure in citing our own experience in the matter, and how we have successfully fought against same in our own establishment, with the results that today it is a rare occurrence that the slightest particle of smoke is emitted from our chimney.

¶ We consume soft coal slack, which would probably produce as much smoke as any fuel used. The way we overcome the difficulty of smoke is by first providing plenty of boiler capacity, so that the fire is not forced to an unusual degree. We fire our furnaces with an underfeed stoker and a fan blower. By means of this underfeed stoker the gases and smoke arising from the fresh coal are entirely consumed by perfect combustion. The only time we are ever bothered with the smoke nuisance is in case of making a fresh fire when we are obliged to put coal on the top of the fire.

¶ We believe that our success in the elimination of smoke is due largely to our exceedingly large boiler capacity.

I. ELBERT SCRANTOM.

M. S. PHELPS MANUFACTURING COMPANY

¶ In re prevention of smoke in Rochester, we beg to say that we believe if the firemen would give this matter thought and do their part it would help in a large way to eliminate the nuisance. If a fireman uses discretion in firing and sprinkles the coal lightly, most of the smoke is consumed before it gets in the stack. Of course, this necessitates firing often.

¶ The nuisance could be entirely done away with if in the down town districts all and everybody would use buckwheat hard coal. Surely those who have the interest of our City at heart would be willing to do this.

¶ We trust that you will succeed in the "good work" and rid our city of its reputation for soft coal smoke.

M. S. PHELPS, President.

A
Successful
Plant

Firemen
and Coal

From Four Factories

W. N. CLARK COMPANY

¶ Your Bulletin No. 4-11 on the "Prevention of Smoke in Rochester" at hand. In reply to the same would say that so far as conditions at our plant are concerned, we make but very little smoke, and do not think that any of our neighbors will have occasion to find fault with us on this account. We burn nut and slack soft coal mixed with hard screenings in equal proportions. In order to burn as fine coal as this, we use forced draft. The combination, however, works out very well, and we consider our method of firing entirely satisfactory.

HOWARD W. CLARK, President.

**Fine
Coal**

EASTMAN KODAK COMPANY

¶ In our opinion the prevention of black smoke when burning soft coal is best accomplished by careful stoking. This is possible, of course, when boilers are hand fired, but more easily accomplished by means of mechanical stoking; accordingly, our boiler plant has been equipped with mechanical stokers, economizers, etc., and the flue gases are led into the high chimney and as a further precaution, the flue gases are automatically tested and the per cent. of carbonic acid gases they contain is registered on charts.

J. H. HASTE,
Manager Kodak Park.

**Careful
Stoking**

CLUM & ATKINSON

¶ Replying to your circular letter, Bulletin No. 4-11, would say our idea of the causes of excessive black smoke is that it is due to either poorly constructed flues which do not provide the necessary conditions for perfect combustion, or it may be, and often is, caused by a plant being over-crowded and the boiler equipment, fires, etc., being forced beyond their capacity, or in other cases, it is due to improper firing. We believe any steps looking to the correction of these three faults, or such of them as exist, will go a long way toward the abatement of smoke.

G. T. MASON, Office Manager.

Forcing

ROCHESTER BUSINESS INSTITUTE

¶ I have found in my own company, the American Drafting Furniture Company, that it is possible to substantially eliminate all black smoke by educating the fireman in the matter of stoking. It is difficult to find a man who is intelligent and conscientious enough at the same time to carry out instructions. I presume my case is like that of other manufacturers, namely, we are anxious to find some device that will mechanically prevent black smoke, so that we may not be entirely subject to the lack of conscience or lack of intelligence of our firemen.

¶ I wish to assure you of my personal hearty co-operation in the work which you are undertaking.

JOHN F. FORBES,
Secretary and Treasurer.

**Good
Fireman**

Smoke Can Be Eliminated

Hard
Coal
in
Dwellings

AMERICAN LAUNDRY MACHINERY COMPANY

¶ In reply to Bulletin No. 4-11, subject, "Prevention of Smoke in Rochester," my experience in manufacturing industries for a great many years has convinced me thoroughly that the smoke nuisance is not at all necessary and can be eliminated entirely, especially in a city like Rochester situated as we are close enough to the hard coal fields and where hard coal is used almost exclusively in the household. Therefore, the only place we have to direct our attention to the abatement of the smoke nuisance is to the factory chimney which makes it an easy subject to solve.

¶ Comparing our city with some of the western and south-western cities where hard coal is sold from \$8 to \$15 per ton, soft coal can be bought for from \$2 to \$3 per ton, and with 90% of the households burning soft coal, it makes it rather a difficult problem to eliminate the smoke nuisance, but in our city we should be very thankful that we have not this question to contend with and our attention should be directed to the manufacturer.

¶ There are several very good smoke consumers that will do their work if directions are carried out. Of course, you cannot take any boiler plant and overload it 100% and equip same with smoke consumers or automatic stokers that will reduce the overrated amount of power and eliminate smoke, but with any well balanced power plant equipped with serviceable stoker, it is possible to burn soft coal at a decrease of cost and entirely eliminate the smoke nuisance.

¶ The types of boilers used in power plants vary considerably but any well designed boiler should give equally good results, and it is fair to say that any boiler will produce from 10 to 20% more evaporation per pound of coal, with perfect combustion as can be obtained from automatic stokers, than by hand firing.

¶ In my estimation there is absolutely no excuse at this date why our City Council should not enforce the smoke abatement ordinance to the letter. The only possible excuse that the manufacturer could offer is the question of first cost in properly equipping power plants, but if they take into consideration the increased heat unit with proper combustion, I am satisfied the saving would show a handsome profit on the investment.

D. M. COOPER, President.

WOOD-MOSAIC COMPANY, INC.

¶ We have tried one of those Air Mixing Flue arrangements which was supposed to give a secondary combustion of smoke. We have also equipped our two boilers with the ——— Smoke Consumer.

¶ The first arrangement increased our draft and we rather think decreased our smoke, but not enough for us to be quite sure on the subject. The ——— Smoke Consumer certainly

Enforce
Ordinance

Careful Firing Essential

dampens down the smoke while firing, but we have come to the conclusion that it only delays the result. When it stops working, the smoke is quite noticeable. It delays and thins out the smoke cloud, but we are inclined to believe that the net amount of black smoke is not very much decreased, although it is spread over a longer period of time in escaping.

¶ The only way that we find we can keep down black smoke is by our careful firing. Our engineer watches this so carefully that we cannot tell when he has the smoke consumer running and when he has not, from observation.

¶ The only time we have a noticeable amount of smoke is when we are burning an excessive amount of wood refuse. This we cannot avoid and we get it whether we are using smoke consumer or not.

¶ We never put enough of this wood in at one time to make the smoke run over the allowed firing limit. We have had the smoke inspector tell us that ours is pretty nearly the only chimney along the line from which he hears no complaints. The only conclusion we have come to is that in our case, at least, careful firing is absolutely necessary.

H. H. BARCLAY, Secretary.

D. ARMSTRONG & COMPANY

¶ In regard to your request for views on smoke prevention in Rochester, would say that we think it impossible to entirely prevent smoke in operating steam boilers by burning soft coal if the boiler is worked up to or near its maximum capacity. However, by using a good smoke consumer, of which there are several on the market, and by careful attention of the operator much black smoke can be avoided.

¶ We get about 240 H. P. out of two 125 H. P. Marine type boilers, equipped with the ——— stoker, by operating them as follows: when necessary to break up the fires only one side of one boiler is opened at a time, broken up as quickly as possible, and the fire-door closed; then in about ten minutes the same thing is done to the other side. By this method we can hold the pressure even, and not make an excessive amount of black smoke during the run. Our experience has been that a good stack draught and clean soot chambers help greatly in clean burning of coal, therefore, less black smoke.

D. ARMSTRONG & COMPANY.

L. ADLER BROS. & CO.

¶ Answering Bulletin No. 4-11, we use the ——— Stokers, and have, practically speaking, no smoke.

¶ In our previous plant we found that the injection of a steam jet, permitting air to be carried through the furnace opening at the same time, was fairly effective in cutting down the amount of smoke.

Wood

A
Good
Tip

Consideration to Manufacturer

¶ The smoke nuisance is a crime against the welfare of the city, and every available means of eliminating it should be adopted.

¶ It is to be hoped that your committee will not let go its work until the problem has been solved.

MAX A. ADLER, Secretary.

HUBBARD, ELDREDGE & MILLER

¶ Referring to your request for a statement of our experience in endeavoring to do away with objectionable smoke, we beg to say that we have used two devices and are now trying a third. None of these have proven entirely effective under all conditions. So much depends upon the quality of the coal, the capacity of the boiler, the atmospheric conditions and especially the conscientious co-operation of the fireman, we are persuaded that even the best device will fail to wholly remove the difficulty.

¶ Assuming that a new plant constructed on the latest scientific lines would almost entirely consume the smoke, it would manifestly be unfair to require a manufacturer to discard an equipment in which thousands of dollars may be invested. In our judgment, the conditions call for united, intelligent and persistent effort to reduce the trouble to a minimum, and such effort will ultimately result in a great betterment, but reasonable consideration should be shown to the manufacturer who is honestly doing all in his power to abate the smoke nuisance.

W. A. HUBBARD, President.

CHARLES H. WILTSIE

¶ I am in receipt of the circular letter of your Committee asking for suggestions and recital of experiences on the above subject. This subject of smoke abatement has interested me for many years. I have watched with interest the development and improvement of various types of automatic stokers and smoke consumers. During the past year I have been especially interested as a member of the Committee in charge of the construction of the new boiler house and heating and lighting plant at the Mechanics Institute on Plymouth Avenue. In the old power plant a type of smoke consumer built eight or ten years ago, was used with a great deal of satisfaction, so that though the boiler house was located in a residential section in the third ward, it was seldom that any complaint was heard because of black smoke from the chimneys.

¶ In the new boiler house constructed last Spring, a better type of stokers and smoke consumers has been installed and a taller chimney constructed, so that the chimney top is practically clean 90% of the time. Very little smoke comes from it at any time.

Difficulties

Read
This
One

A Very Thorough Analysis

¶ I am convinced, furthermore, that these new stokers will pay for themselves in the resulting economy of fuel in three or four years at the longest. It will pay any man, interested in this subject, to examine and study this new boiler plant at the Mechanics Institute. It was installed and constructed under the supervision of Mr. Crocker.

¶ If such results can be achieved in one boiler plant, why can they not be achieved in others? The installation of such smoke consumers means an initial expense which will be more than covered in ultimate savings in fuel. I firmly believe that two or three types of smoke consumers have been so far perfected at the present time that your Committee is warranted in taking a decisive stand in seeking ordinances from the Common Council forbidding the construction of any new boiler plants within the city limits in the future, above a certain horse-power, without the installation of smoke consumers, and that boiler plants under a certain fixed horse-power, be required to use only hard coal, or some form of coal that will burn without black smoke.

¶ This is my main suggestion and I believe it practical and warrantable. If you can prevent the future installation of boiler plants without smoke consumers, much will be accomplished. Our highest State Court, the Court of Appeals, has now decided that a city ordinance regulating the smoke question, is legal. As the construction of buildings is under the supervision of a building department and stringent regulations have been provided in order to provide against fires and to safeguard health, it seems to me that such regulations as I have suggested above, will be perfectly legal and warrantable.

¶ As a second suggestion, I think that all large boiler plants in the center of the city, such as are used in public buildings and office buildings, and which are above a certain horse-power capacity, should be ordered to be equipped with smoke consumers within twelve or eighteen months and that all manufacturing plants above a certain horse-power, should be brought within the same classification.

¶ It is not to the point for me to recite my own personal annoyances and losses because of office building chimneys close to the windows of the offices in which I spend my working life; but it is hard for me to understand why I should suffer such annoyances and losses from the nuisance of black smoke from nearby office building chimneys in order that the owners of such properties may increase the annual profits or income of their buildings by the difference in cost between a low grade of soft coal and a satisfactory grade of anthracite coal. The owners of such buildings are making the increased income or profit from their properties, while I and hundreds of others are enduring the nuisance and paying losses in various forms, in the aggregate, much exceeding such increased profits.

Good
Stokers

An
Ordinance

Legality

A
Good
Point

Suitable Coal—Intelligent Firing

Smoke and the Tariff

¶ If cities like New York and Washington have no smoke nuisance because of stringent regulations, why cannot Rochester have equally favorable conditions?

¶ This smoke question in a city like Rochester, is quite analogous to the Tariff question. The man whose business is consuming a large amount of coal, wishes to continue the privilege at the expense of all the rest of the community. The man who manufactures steel, wishes his protection through the Tariff at the expense of all the consuming community. It is not a question of the ability of either to exist and to make money. The question so far as smoke is concerned, is whether he shall be able to make a little more money by adding to his profits the difference in price between a low cost fuel and a high cost fuel.

¶ I would not favor any action on this subject that would put any manufacturer out of business, or handicap him in competition against others; but the difference in the cost of the two kinds of fuel, does not mean this. If it were possible to compel every fuel consumer, tomorrow, to burn only anthracite, the increased cost would not put any manufacturer out of business. It would, of course, lessen his annual profits somewhat; but I believe that the benefits that would accrue to the whole city in consequence, would, in value, more than make up this difference.

C. H. WILTSIE.

ESTABLISHMENT OF LEWIS P. ROSS

¶ Answering your circular in re Smoke Prevention will say that in our plant we have two boilers which are used for heating purposes only. Our location is such that we are, of course, subjected to pretty close scrutiny, our boilers and stack being located on the Division Street end of our building, bringing them very close to the rear windows of the Department Stores on Main Street and Clinton Avenue.

¶ We have no mechanical stokers or any device in the way of a smoke consumer and our problem has been settled, so far as it is settled, by just two things, namely: experimentation until we found a suitable coal, and second, intelligent firing and stoking.

¶ For some time we have been using what is known as Smokeless coal, and by exercising care in running the boilers we believe that we have kept our smoke nuisance at a minimum point and that we at least have far excelled many of our neighbors whose stacks are in plain sight of our windows.

¶ It is our desire, of course, to co-operate in any reasonable way in abating the smoke nuisance, the iniquity of which we fully recognize. We have done and are now doing all that we can to minimize causes for complaint so far as we are concerned, and in this respect we might say that for the past two

Some Experiments

years no complaint has been made to us, so far as we have known, and no complaints have been made directly to us with one exception, and that was on occasion when a prevailing west wind and some smoke cinders, resulting from coal experiment going on in our institution, possibly rendered us subject to criticism for a short time. This, of course, we were glad to remedy and did remedy a long time ago.

GEORGE G. FORD, Credit Manager.

TAYLOR INSTRUMENT COMPANIES

¶ In answer to your communication (your Bulletin No. 4-11, Prevention of Smoke in Rochester).

¶ We do not know how valuable our experience is; we have no way of comparing, but have done considerable ourselves in the line of experimentation.

¶ Our plant is not a very large one, about 300 horse power, and it is possibly nearer kin to the average manufacturing plant than though it were larger. We have experimented with automatic stokers, with shaking grates and careful firing, with steam and air blast blown in over the grates and of the three above mentioned methods of preventing smoke, we are now using the air and steam blast and we think that it is giving us greater satisfaction than either of the other two methods.

¶ Our experience is such in the attempt to abate the smoke nuisance, that we are prepared to say *positively*, that it can be materially lessened and kept well within the limits of the requirements of the Rochester Ordinance as it stands at present, unless the firemen and owners get careless, and in which case we see no injustice in putting a gentle pressure upon them to behave themselves, that a conviction and fine would put, and we are heartily in favor of all legitimate attempts to stop the smoke nuisance.

¶ We are in a neighborhood of residences, and it is more than possible that at times we are at fault in this matter ourselves, and we welcome the gentle pressure from the inspector and would bear no animosity toward our neighbors who can criticize and we think that if this spirit were held generally by the people of Rochester, the smoke nuisance would disappear like magic, as the cost of installing the devices for eliminating smoke is returned (from our experience) in fuel saving.

J. M. TAYLOR, President.

GERMAN-AMERICAN BUTTON COMPANY

¶ It may interest you to know our experience along the line of smoke prevention. We have a battery of 3-150 H. P. Heine Boilers, with the ——— Automatic Furnace. We burn slack, the cheapest grade of bituminous coal. Our boilers at times are heavily overloaded, and it is only on the very rarest occa-

Air and
Steam
Blasts

One Effect of Smoke

sions that we see any smoke at all coming from our stack, and then only a light gray color. Would say for our particular case the problem has been solved. Should be very glad to show these results to any interested party.

LEWIS H. RUSSELL,
Assistant Superintendent.

SIBLEY, LINDSAY & CURR CO.

¶ Replying to Bulletin No. 4-11, subject, "Prevention of Smoke in Rochester" we desire to state that we have used smoke consumers on the Granite Building and on our store building for several years. We do not remember of ever having a complaint from any of the neighbors or from anyone else in regard to smoke from our chimneys.

¶ Anyone who will look at the Granite Building will notice that notwithstanding it was cleaned at the expense of three thousand dollars after the fire, it is worse now than at any previous time. This is due to the use of soft coal in the surrounding buildings, one of which is the Chamber of Commerce Building.

RUFUS A. SIBLEY.

Loss
Through
Smoke

To Sum it All Up

¶ A man will sometimes have a week's work to get through in a day. Under those conditions, the man will make the dirt fly until he accomplishes the task before him. He will be so busy getting things done that he will not pay very much attention to the way he does them, he will not fuss over the by-products, he will not wonder if he is doing the work most "efficiently"—he will simply work as hard as he can and GET THE THING DONE.

¶ After the task is finished, he will go on to new tasks and these will occupy his attention but he will have time eventually, to stop and consider his work. A Hindu proverb has it, "A Fool used an Elephant to step on an Ant." So the man will wonder if he used too much force, wasted it, in fact, in accomplishing his work. He will consider if he could get the same thing done with less waste and less cost.

¶ Rochester has been in the place of the man who had so much to do and so little time to accomplish it all. In common with rising American cities, we have grown too fast to stop and think HOW to grow. And so we have had smoke. We have been accustomed to it. To many, it has not occurred that smoke is undesirable.

¶ We have reached the stage of our development where we have time to think about the best way of doing things. This question has arisen: WOULD WE NOT BE BETTER WITHOUT BLACK SMOKE?

Public Opinion and Black Smoke

¶ Some manufacturers believe that such smoke is necessary to their success, some folk do not think it does any harm. Others feel that black smoke represents individual selfishness imposing on the common welfare. In all calm discussion, it is possible to sum up the known facts and balance the two columns. Try it now.

¶ The air in the country is admitted to be better than that of the city. Tubercular people are sent there to recover their health. Plants and flowers thrive better in the country. In the judgment of experts there is one big reason for these things—there is no black smoke in the country. If black smoke is fatal to tubercular lungs it must be, in some degree, inimical to normal breathing organs. We must grant that black smoke is unhealthy. YOU would enjoy a greater degree of health if Rochester were free from it.

¶ Firms that make a business of removing soot from buildings by sand blasting are prospering. Soot comes from black smoke. If soot collects on the OUTSIDE of the building, it must also collect on the INSIDE. Soot can be removed from stone or granite but it cannot be cleaned successfully from merchandise. We must also grant that black smoke reduces the value of merchandise. YOUR property would be worth more if Rochester were free from it.

¶ Public opinion—YOUR opinion makes Laws and Ordinances powerful. Enforcement becomes simple and easy when the people desire a thing. This is your problem.

¶ YOU MUST DECIDE WHETHER PUBLIC HEALTH AND THE PROPERTY OF ALL ARE MORE IMPORTANT THAN THE QUESTIONED ADDITIONAL INCOME DERIVED BY COMPARATIVELY FEW THROUGH THE PRODUCTION OF BLACK SMOKE.

Clean
Air
and Health

Clean
Air
and Mer-
chandise

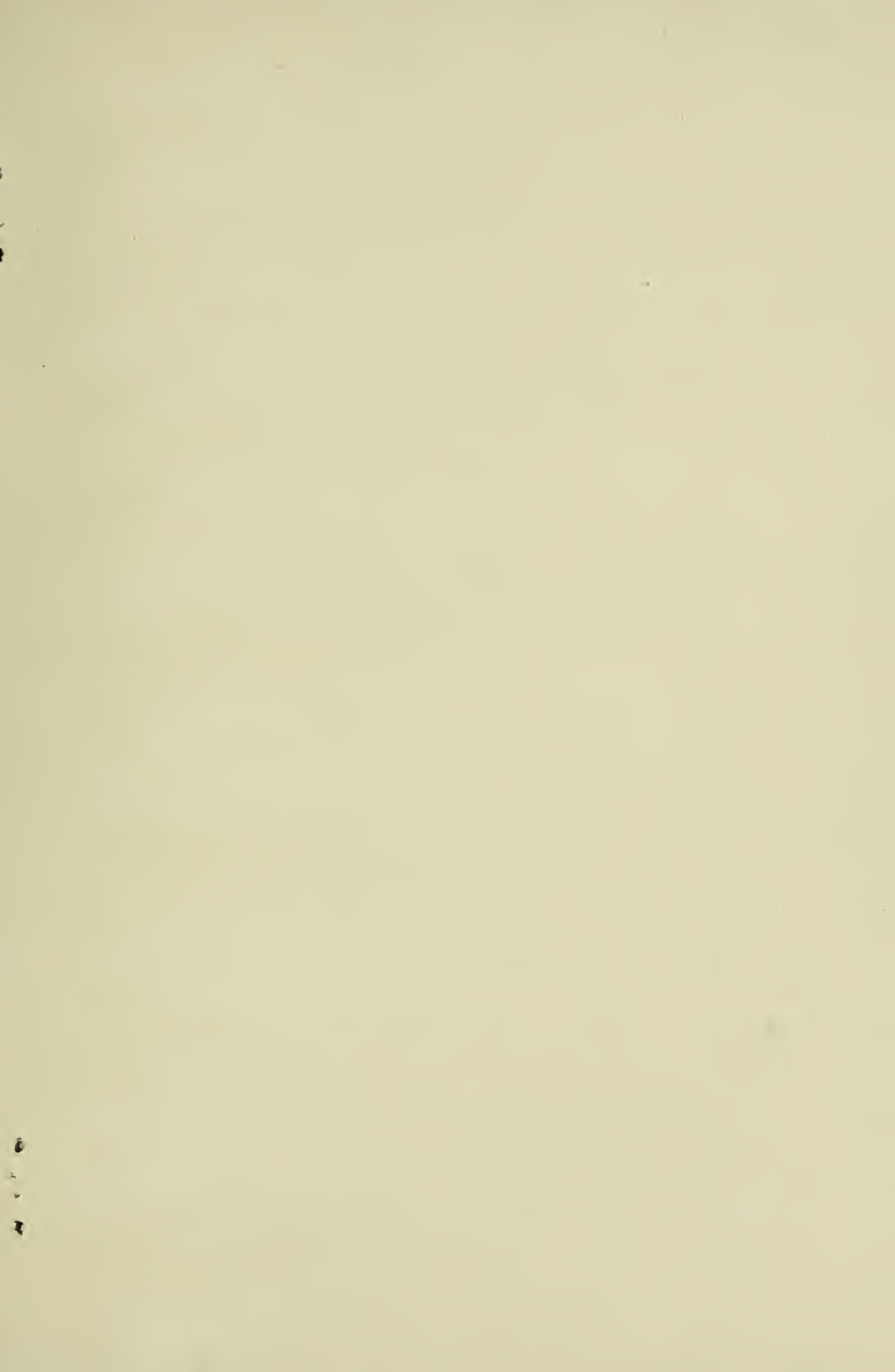


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